A. Cover Sheet

1. Specify: ☐ agricultural project or **X** individual application or project
   X urban project ☐ joint application

2. Proposal title---concise but descriptive: Arden-Cordova area ET Controller/rain shut-off program for residential single-family households.

3. Principal applicant --- organization or affiliation: Southern California Water Company

4. Contact---Name, title: Kirk Brewer, Water Use Efficiency Manager

5. Mailing address: 1920 W. Corporate Way, Anaheim, California 92801

6. Telephone: (714) 535-7711 x265

7. Fax: (714) 535-8616

8. E-mail: kbrewer@scwater.com

9. Funds requested---dollar amount: $11,875

10. Applicant cost share funds pledged—dollar amount: $11,875

11. Duration—(month/year to month/year): March 2001 through June 2001

12. State Assembly and Senate districts and Congressional district(s) where the project is to be conducted:
    State Assembly district: 10
    Senate district: 5
    Congressional districts: 5, 11

13. Location and geographic boundaries of the project: Arden-Cordova Customer Service Area (see attached service map)

14. Name and signature of official representing applicant. By signing below, the applicant declares the following:
    -- the truthfulness of all representations in the proposal;
    -- the individual signing the form is authorized to submit the application on behalf of the applicant;
    -- the applicant will comply with contract terms and conditions identified in Section 11 of this PSP.

Kirk Brewer _____
(printed name of applicant)

_____
(date)

_____
(signature of applicant)

B. Scope of Work

1. Executive Summary

Et Controller: The ET. Controller replaces the conventional time clock used to control when sprinklers come on and how long the watering cycle continues. . The ET Controller used in this Proposal receives a signal in the same manner as a pager. The signal originates from a DWR approved CIMIS Station; that measures the ETo rate, or the weather conditions which determine the moisture evaporation rate from the soil and plants. The manufacturer of the ET Controller, who uses the data to send signals to the ET Controller, which adjust the watering cycle to meet the varying need, intercepts the signal.

Once the ET Controller is installed and properly set up, it seldom requires any further adjustment by the resident. This is a key factor in that proper watering is no longer dependent on the memory or expertise of the participant or, his/her gardener.

Southern California Water Company has conducted similar irrigation water controlling programs. This experience indicates that when the installation work scope includes time for an irrigation system check or, "tune up", there is much higher degree of participant satisfaction and program success. When tune ups are not included the landscape contractor performing installations receives a high number of complaints regarding under watered "brown" areas. Such callbacks are costly to the contractor in terms of loss time and participant confidence in the product and service provided. Tune ups take from 30 to 45 minutes to conduct and normally include the change-out of a small number of sprinkler heads. Actual installation including a rain shut-off device will take an average of two (2) hours. A minimum of two (2) follow-up calls from the Program Administrator to the participant helps to insure participant satisfaction and the opportunity to take any corrective action needed such as final system adjustments.

The Participant is required to pay a $4.00 per month service fee for the ongoing monitoring and "pager-link" updating of the controller's watering profile. With out such weekly update, the ET Controller no longer has the ability to adjust watering cycles based on water need and the real value of this water conservation tool is compromised. If the participant is not satisfied with the product from the get-go, or otherwise perceives he or she is not receiving an average of at least $4.00 worth of savings per month, then the incentive for them to continue with the use of this product is lost.

SCWC believes the successful implementation of this program must include all services as described above.

A recent pilot study in the City of Irvine was performed using test criteria approved by the Metropolitan Water District of Southern California ("MWDSC"). That study yielded an average additional water savings of 51 gallons per day ("gpd") on an average landscape of approximately 1,740 square feet. These saving are considered to be conservative, as Irvine already has in place tiered water conserving rate structure, landscape water budgets, and mild climate. SCWC's program targets Participants with 1,950 square feet or more of irrigated landscape. This equates to a minimum average savings of 57 gpd, using a ratio for the savings derived in the Irvine study.

2. Statement of Critical Issues

The balance of water use and supply is an urgent concern throughout California. Water supplies to Southern California from the Colorado River Aqueduct and the State Water Project are decreasing even as population continues to increase, making the need to conserve California's water even more crucial.

As the population of California continues to grow, demands for additional water supply will also grow. Developing new water supplies to meet these increasing demands, treating this water and building new infrastructure to deliver the water is very expensive. Conservation is unquestionably the most cost-effective approach to balancing the needs of the state, and the best programs rely on a combination of installed technologies and customer education.

The ET Controller goes beyond the current requirement of the California Urban Water Conservation Council's ("CUWCC") Best Management Practice ("BMP") #1, Water Survey Programs for Single-family Residential and Multi-family Residential Customers. This BMP enhancement recognizes the outside water saving potential not otherwise captured in this or any other BMP. The Southern California Water Company ("SCWC") proposes to provide this incentive at no cost (other than the ongoing $4.00 monthly service charge) to all of its customers having a minimum irrigated landscape of 1,950 square feet. This Proposal is limited to 50 interventions a year based on SCWC funding constraints as covered under Section E of this Proposal.

As stated under the Executive Summary above, the participant must be satisfied with the product from the get-go. If he or she believes the product is not worthy or, is not providing an average of at least $4.00 worth of savings per month, then the incentive to continue with the use of this product is lost. SCWC will work closely with the Installing Contractor and the Program Administrator to assure the participant is satisfied with the product.

3. Project Nature, Scope, and Objectives

This Project will deliver the ET Controller and Rain Shut-off package to 50 SCWC Customer Participants who's water use is identified in the top 20% and who's landscape is determined to be a minimum of 1,950 square feet.

A Contractor who has previously worked with SCWC in program management and who has a working knowledge of BMP #1 will administer this Project. This Project Administrator will identify local landscape contractors who are qualified to install the ET Controllers and Rain Shut-off devices and who meet the high service requirements of SCWC. The Project Administrator and SCWC will jointly select the landscape contractor(s) who will perform the tune-ups and installations.

Programs of this nature work best during the warm months of the year. If awarded this grant, SCWC will implement the program from May/June through September/October, 2001.

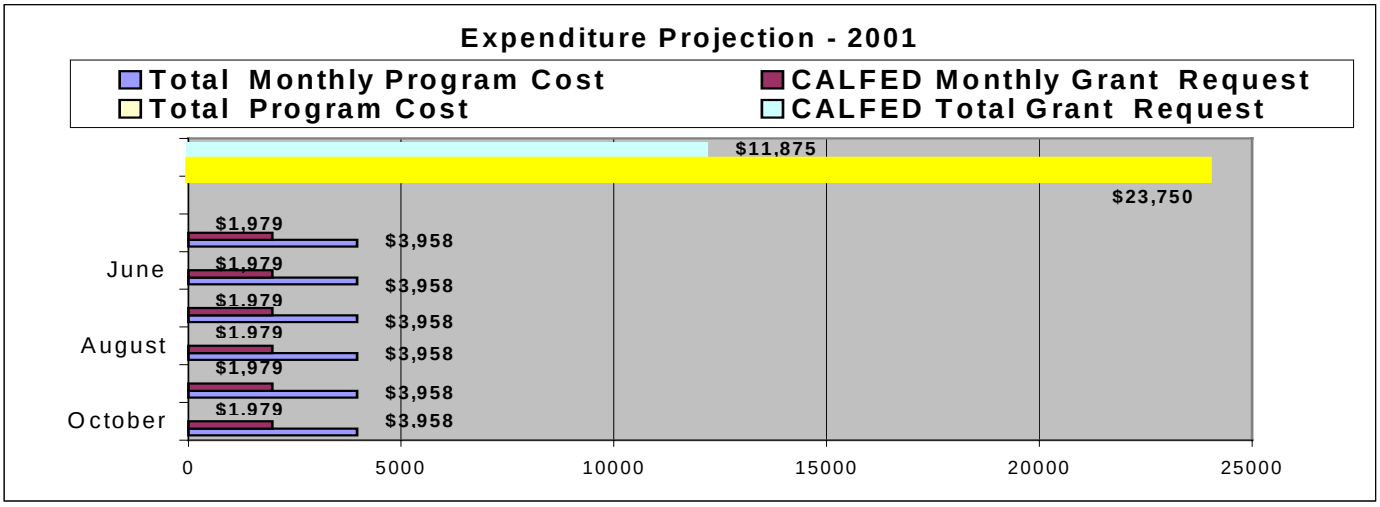
4. Methods, Procedures, and Facilities

This ET Controller and Rain Shut-off Project contain several evaluation elements. The participants offered this program will be customers who have resided at the target service address for a minimum of three (3) years prior to installation of the products. Three (3) years of water use history will be analyzed and inside water use for the two lowest billing periods (two (2) months each) will be averaged and deducted from the two (2) highest month billing periods to determine the relative amount of water used outside. SCWC will then compare the past outside consumption with post-intervention outside consumption of those same participants remaining at the same service address for three (3) years following the installations to determine the actual water savings achieved. The results of this analysis will be shared with CALFED upon request.

The targeted customers will be sent mailers asking them to respond to a local number if they are interested in participating in the program. Follow call will be made to those who have not responded to the mailers. The Project Administrator will provide the list of interested participants to the selected Installation Contractor(s) who in turn will contact those SCWC customers to schedule tune-up and installations appointments. The Project Administrator will be responsible for direct program oversight and performance of follow-up calls.

B-5. Scope of Work - Schedule **Arden Cordova**

Major Program Tasks	Deliver-able Time-frame	Implemen-tation Time-frame	Projected Program Cost w/out CALFED Funding = $23,750	Projected CALFED Grant Request Amount = $11,875
Identify Project Administrator & Award Management Contract.	May	May	$ 3,958	$ 1,979
Identify Installation Contractor, Award Contract, Place Order for Et Controllers & Rain Shut-off Devices.	June	June	$ 3,958	$ 1,979
Identify Target Participants, Commence Installations.	July	July	$ 3,958	$ 1,979
Continue Installations	August	August	$ 3,958	$ 1,979
Continue Installations	Sept.	Sept.	$ 3,958	$ 1,979
Complete Installations & Prepare Project Report.	October	October	$ 3,958	$ 1,979
		Totals	$ 23,750	$ 11,875



5. Monitoring and Assessment
The Project Administrator will provide ongoing reports on the Project's progress throughout the installation and follow-up phase. SCWC will conduct post program review on water savings against pre water use histories developed by the Project Administrator using SCWC water use histories on the front end of the Project.

C. Outreach, Community Involvement, and Information Transfer

1. Outreach Efforts
This Program is being offered to SCWC's Single-family customers with high water use, large landscape areas throughout the Arden-Cordova District Customer Service Area ("CSA").

The proposed project would benefit the residents of the Rancho Cordova and the Arden-Arcade communities which are served by SCWC. Parts of both communities are considered to be economically disadvantaged. According to the latest U.S. Census data available, a combined total of 14,688 residents are living below the poverty level in the service areas.

2. Training, Employment, and Capacity Building
The Product manufactures will provide any needed training to the installation contractor(s). Training in the tune-up and SCWC customer service expectations will be provided by the Project Administrator. Training for the participant in terms of product use will be provided by the installing contractor with follow-up by the Project Administrator. To the maximum extent possible, local contractors will be used to implement the Project.

3. Information Dissemination
This Project will initially reach 50 customers and thereafter reach an equal number, provided needed internal and external funding is available. The results of this Project will be provided to the project participants and to all participating agencies and others requesting summaries of the results or otherwise identified as agencies benefiting from the results.

4. Letters of Notification
The ET Controller with Rain Shut-off is a new program for SCWC. To date, SCWC has not sought any other outside funding partners. Such additional partnership funding will be pursued in future proposal submittals.

D. Qualifications of Applicants, Cooperators, and Establishment of Partnerships

1. Project Manager
Southern California Water Company – Kirk Brewer, Water Use Efficiency Manager
Eight years of conservation related experience; 12 years of water utility operations experience; over 23 years of project management and implementation experience.

2. External Cooperators
SCWC is coordinating with a number of water agencies concerning the ET Controller technology, its application, economical purchase quantities, and water savings data. This includes MWDSC and several of it's Member Agencies, East Bay Municipal Utilities, Contra Costa Water District, and San Barbara County Water Authority.

3. Partnerships
SCWC is promoting the outside funding and/or acquisition of the WeatherTRAK ET Controller for the inventor and manufacture, Mike Marion. Such action is being pursued in an attempt to reduce the cost of the product to all market segments.

E. Cost and Benefits

1. Budget Summary and Breakdown
The estimated cost per ET Controller/Rain Shut-off intervention installed including all labor and administration is $475.00

The Project total cost for this District CSA is $23,750

(See Table 1 for Budget Breakdown)

2. Budget Justification
The budget shown for this Project in Table 1, are necessary to assure the success of the Project. SCWC could elect to remove the "tune-up" and follow-up components in order to make this proposal appear more attractive. Past experience provides our resolve concerning the inclusion of these steps as absolutely critical to the overall success of this Project.

3. Benefit Summary
The total water savings from this program are estimated at 31.92 acre-feet. Today's value of the conserved water for SCWC is $500 per acre foot (based on SCWC's derived incremental cost) or, total savings of $15,960. The water savings per year is based on the ten year program life, or 3.19 acre feet per year. [(Life of program based on studies performed by Metropolitan Water District of Southern California (MWDSC), Municipal Water District of Orange County (MWDOC), and Irvine Ranch Water (IRW)]

a. <u>NPV (Net Present Value) Method:</u>
NPV = Discounted benefits – costs or;
$11,739 - $23,750 = ($12,011)

<u>BCR (Benefit Cost Ratio) Method:</u> (Assumes total program cost funded by SCWC)
BCR = Sum of Discounted Benefits/Sum of Costs or;
$11,739 / $23,750 = .4943

<u>Simple Pay-Back Analysis:</u>
Savings Per Year = 3.19 AFY
SCWC @ $500.00 / AF x 3.19 AFY = $1,595 / year or
$23,750 / $1,595 = 16.44 years

$475.00 x 50 units = $23,750 x .4943 = $11,739.63 (SCWC's cost effective amount. SCWC understands it and/or other funding partners must contribute a minimum of ½ the project cost, therefore SCWC will commit to $11,875.)

SCWC = $11,875
CALFED = $11,875

b. Qualitative benefits for this Program include healthier plants, shrubs and turf and less runoff of pesticides and fertilizers into storm drains or intrusion of it into underground aquifers.

4. Assessment of Cost and Benefits

a. Assumptions relating to this Project
   1. Only Single-family residences with existing automatic sprinkler systems are targeted
      b. Minimum irrigated landscape is 1,950 square feet.
      c. Minimum water savings is 57 gallons per day.
   2. Only Participants agreeing to the $4.00 per month service charge will be included in the Project.
   3. Participants should expect to see their water usage and resultant cost of water drop. Participants should also see healthier landscape and lower cost for fertilizers.
   4. The environment will benefit from reduced pollution to streams and oceans as a result of reduced runoff and underground water sources will have less impact from fertilizers and pesticides.

b. All figures in this Proposal are expressed in year 2000 dollars. All cost are incurred in year 1, thus the total program cost of $23,750 is not discounted.

c. All costs in this Proposal are firm for the life of the Project.

d. Summary of cost:

Total cost of this Project:	$23,750
Total cost per acre foot:	$744.05
SCWC's cost per acre foot:	$372.03
CALFED's cost per acre foot:	$372.02
Cost per intervention	$475.00

e. There are no non-quantified costs associated with this program. The non-quantified benefits to all parties affected by this Program are environmental. Conservation reduces demands on water diversions from the Bay Delta and the Colorado River. When less water is diverted, water quality in the Delta improves and more water is available for the delicate ecosystem that relies on it.

f. This Program reduces outdoor water use. Outdoor savings result from proper watering schedules. Proper watering schedules reduce runoff and associated pollution to storm drains, rivers, and the ocean.

g. Conservation contributes to a healthier environment and saves precious resources for future generations.

Kirk S. Brewer
Water Use Efficiency Manager
Southern California Water Company

February 2001

Mr. Brewer is the Water Use Efficiency Manager for Southern California Water Company (SCWC), an investor-owned utility serving water to 1 out of 30 people throughout California. Mr. Brewer's office is currently located at the Company's headquarters in San Dimas, CA.

Mr. Brewer grew up in the water industry, working for "fun" in a meter repair shop at the age of 10 and on pipeline jobs at the age of 13. He came to SCWC in 1987 as an expert in the fields of construction, procurement, operations, construction equipment and management. This breadth of experience has allowed SCWC to utilize Mr. Brewer's talents as the District Manager of the Company's largest District, the Director of Operations Support (which included oversight of construction, procurement and budgets) and in his current role of Water Use Efficiency Manager.

As the Water use Efficiency Manager, Mr. Brewer has a special interest in assuring that water is used wisely. To achieve this goal, he works closely with local officials, cities, government agencies, other water utilities/agencies and a number of water related special interest groups.

Since being appointed as SCWC's Water Use Efficiency Manager, he has worked closely with the Company's Regulatory Affairs Department to develop, quantify and perform cost effectiveness analysis for the Company's conservation programs. He has also represented the Company before the California Public Utilities Commission on water conservation proceedings. SCWC is now recognized by the Commission as the leader in Urban Water Conservation.

Mr. Brewer developed SCWC's conservation ethic and continues to provide oversight for all of SCWC's conservation programs. SCWC's programs are implemented using Contractors and Community Based Organizations (CBOs). The use of CBOs has often included the training of their personnel in basic job skills for conservation and operational tasks. This activity has resulted in over 15 such individuals securing either full-time careers or alternatively, part-time employment with Southern California Water Company.

Mr. Brewer also takes and active role in public policy that affects the water industry, and was appointed by his peers to serve as the Convenor (President) of the California Urban Water Conservation Council for the Calendar year 1998. Mr. Brewer was recently selected to serve as one of 59 members on the state Department of Water Resources Public Advisory Committee which is charged with providing input for the preparation of the next California Water Plan Update, Bulletin 160-2003. He represents the California Water Association on this board.

Before arriving at SCWC, Mr. Brewer worked in a variety of management roles for corporations including Bechtel, Flying Tigers and ARAMCO. He has a Bachelor of Science Degree in Business and Industrial Management from San Jose State University. He and his bride of 33 years, Perilla, have a daughter, Alexia, who is majoring in Landscape Architecture at CalPoly in San Luis Obispo, CA and a son, Connett, who is in his senior year of high school. The Brewers reside in San Pedro, California

Table 1 - Budget Breakdown

	Direct Costs	Cost Sharing SCWC	Cost Sharing CALFED
a. Salaries and Wages (Includes program management & supervision, and contract administration.)	$1,034.00	$517.00	$517.00
b. Fringe Benefits	$466.00	$233.00	$233.00
c. Supplies	$0.00	$0.00	$0.00
d. Equipment	$0.00	$0.00	$0.00
- Et Controller (50 @ $200.00/ea.)	$10,000.00	$5,000.00	$5,000.00
- Rain Shut-off Device (50 @ $40.00/ea.)	$2,000.00	$1,000.00	$1,000.00
e. Services or Consultants			
- Installation (50 @ $120.00/ea.)	$6,000.00	$3,000.00	$3,000.00
- System Check "Tune-up" (50 @ $60.00/ea.)	$3,000.00	$1,500.00	$1,500.00
- Administrative cost (50 @ $25.00/ea.)	$1,250.00	$625.00	$625.00
f. Travel	$0.00	$0.00	$0.00
g. Other Direct Costs	$0.00	$0.00	$0.00
h. Total Estimated Costs	$23,750.00	$11,875.00	$11,875.00